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ABSTRACT

The Stanford Curriculum Study, which provides comprehensive and systematic information about curricular choices of undergraduates, is discussed. The information can promote policy decisions, help departments regularly monitor their programs, and generate a database for research concerning undergraduate education. The study analyzes the academic records of each graduating class, relating characteristics such as gender, Scholastic Aptitude Test scores, and ethnicity to course and major choice, grades, academic honors, and other indicators of student accomplishment. The database for each year of the Curriculum Study contains about 50 records per student, one for each course taken. With about 1,600 students in each graduating class, there are about 80,000 records in the file. Data from the study are also used to produce the annual Curriculum Report. Information is provided on the study methodology, including the population, the database, the university's academic structure, and the Curriculum Report. Also discussed are the background characteristics of graduates, course enrollments and units of credit, and characteristics of courses. Appendices include a sample table providing descriptive statistics on 1980-1981 majors in industrial engineering. (SW)

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ANALYZING ACADEMIC RECORDS FOR INFORMED ADMINISTRATION:

THE STANFORD CURRICULUM STUDY

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ANALYZING ACADEMIC RECORDS FOR INFORMED ADMINISTRATION:

THE STANFORD CURRICULUM STUDY

ABSTRACT

The Stanford Curriculum Study represents a seven-year effort to generate systematic research results that can be used to inform policy decisions regarding undergraduate education. The study analyzes the academic records of each graduating class, relating characteristics such as gender, SAT scores, and ethnicity to course and major choice, grades, and so on. This article discusses the goals, background, and methodology of the study. It also provides a brief overview of the data presented in the annual Curriculum Report.

ANALYZING ACADEMIC RECORDS FOR INFORMED ADMINISTRATION:

THE STANFORD CURRICULUM STUDY

INTRODUCTION

Universities and colleges in the United States have generally ignored one of their most valuable and accessible data resources despite the strenuous efforts they make to generate and maintain it. Increasing numbers of institutions compile their records of student academic accomplishment in computer files and thus have the potential to analyze them with relative ease using a variety of statistical packages and programming languages [2, 4]. Yet few have done so beyond a quite elementary level for examples of some limited efforts, see [1, 3, 5, 6, 7].

We report here on the Stanford Curriculum Study, a major effort over the past seven years to use the vast fund of information contained in the institution's academic records in a systematic and informative way. The Curriculum Study is making possible new approaches to policy-making with regard to undergraduate education: policy decisions can now be informed by reliable and comprehensive data about what students actually do rather than generalized preconceptions and informed guesses. We offer these reports with the hope that other institutions may be prompted to undertake similar analyses of their academic records, both for their own internal use and for purposes of comparison.

However carefully compiled, the information generated by analyses of academic records does not supply immediate solutions to difficult academic problems. The type of analysis we have developed can inform administrators and faculty of, for instance, shifts in student choices of majors and courses -- perhaps showing that students are flocking to economic and engineering majors, instead of choosing history or psychology as in the past. We may even

be able to project the likelihood that short-term trends of this kind will continue for several years into the future. But such findings in themselves cannot determine the appropriate institutional response to such shifts. Should the university "ride the wave" of student sentiment and adapt to changing student preferences? Should it actively encourage students in the directions indicated by the trend? Or should it take various steps to resist the tides of change? Curricular analysis cannot answer these questions by itself, but it can both alert decision-makers to the changes and provide clues as to the likely consequences of various possible courses of action. This is the major benefit of curricular analysis, and we find it more than justifies the effort required.

In this article we will describe the purposes of the study and the methodology we have used to generate the data base and to produce our annual Curriculum Study Report. We will also give a broad overview of the data for the first seven years of the study. In subsequent articles we will present analyses of three important issue areas and show how data from the Curriculum Study are being used to inform debate about policy matters related to these issues. These areas are:

(a) Changes in students' choice of major and shifts in departmental course enrollments

(b) Sex differences in the characteristics and curricular choices of undergraduate students.

(c) Grading, academic honors, and other indicators of student accomplishment.

BACKGROUND AND GOALS OF THE STANFORD CURRICULUM STUDY

When one of the authors of this report took office in 1975 as the Vice Provost and Dean of Undergraduate Studies, he realized that efforts to

identify and solve problems in undergraduate education would be greatly aided if a more effective informational base were present in this area. In collaboration with the Registrar of the University, also an author, they initiated the Curriculum Study.

The original goals of the project have broadened and become more ambitious over time, but their essence can be captured in three basic aims:

(1) To provide systematic and carefully obtained curricular information to inform policy decisions at Stanford.

(2) To involve departments and faculty in periodic evaluation of their programs.

(3) To generate an on-going data base for research concerning various aspects of undergraduate education.

The following examples illustrate the ways in which comprehensive curricular analysis has served these goals.

(a) In discussions of grade inflation, curricular analysis has determined if and in what direction the grading standards of the university have changed.

(b) With regard to the concerns of humanities departments about their loss of student majors, trend analysis has helped assess the extent and possible sources of the problem.

(c) In the debate to re-establish a foreign language requirement, curricular analysis has determined the proportions of entering freshmen who would already have met different versions of the proposed requirements.

(d) Though women have entered the engineering disciplines in greater numbers than before, a significant proportion have had difficulty completing their programs of study. The Curriculum Study has made it possible to compare the academic performance of women and men in these fields and to

study the effect of relevant factors such as differential preparation in mathematics on their performance.

With respect to the goal of stimulating self-evaluation, it is well known that departments are often reluctant, for various reasons, to devote much time to reviews of their undergraduate programs. The regular publication of the Curriculum Report, as well as the frequent references made to it in policy-making bodies, tend to remind faculty and administrators that periodic review of the content and coherence of the curriculum is both possible and important. In this way central administration can maintain friendly pressure on departments not to "let things slide." We have already seen some serious efforts of the part of several departments to make improvements where research has identified problems.

These two goals are complemented by the generation of a data base that is suitable for the kind of research implied by the goals of the project. During the planning phase of the study it became clear that the system used to maintain the Registrar's files did not have the characteristics and capabilities required for researching many questions pertaining to undergraduate education. The data files produced by the Curriculum Study are processed in a more versatile computer environment and are written and formatted in a way that makes them accessible to a variety of computer tools. They can also be archived and easily retrieved for study as particular research issues arise in policy discussions. The very existence of the data base has the further benefits of:

(a) Providing the capability for monitoring undergraduate education on a long-term basis. As we shall show in later articles, the most useful and interesting findings produced by a systematic study of student curricular choices are those that deal with time trends and longitudinal developments.

Indeed, a one-time "snapshot" study of student academic activity is of only very limited usefulness.

(b) Bringing issues of undergraduate education to the fore on the university's agenda of concerns. As the data base is used to provide information regarding an increasing number of issues, it comes to be seen as a valued and reliable resource. At Stanford, policy-makers have begun to pay more attention to undergraduate concerns in part because this resource makes systematic knowledge about undergraduate education possible. To some extent, issues about which reliable information can be rather easily generated are more likely to receive attention than those about which only intuitive or popular-culture impressions are available.

In sum, the aim of the Curriculum Study has been to help the university consider issues involved in undergraduate education more systematically. We believe that it has been successful in this, particularly when seen as part of the larger body of research concerning undergraduates (including an annual survey of graduating seniors' assessments of undergraduate education and a longitudinal study of the Class of 1981) that has been concurrently conducted.

METHODOLOGY OF THE STUDY

The Curriculum Study has two primary components. One is the creation and up-dating of a data base that is suitable for research purposes. The second is the production of an annual Curriculum Report that analyzes many important relationships in the data and provides a general framework for assessing student curricular activity.

A. The Population

Most of the on-going statistical reports at Stanford, such as the course enrollment and grade distribution reports produced by the Registrar's Office, offer descriptions of current student activity only. In contrast, the

population included in the Curriculum Study data base is defined as all seniors graduating in a given academic year (about 1600 students per year). The academic records compiled for these students include all of their Stanford course-taking activity, i.e., generally four years of academic effort (excluding transfer credit from other institutions). The data base and reports thus describe undergraduate activity during successive and overlapping four-year periods, with a separate data file for each class of students. The first group entering the data base was the Class of 1976.[1]

There are many advantages to using information from graduating cohorts instead of cross-sectional data. First, the fact that the information covers a four-year period means that short-term shifts or anomalies in the data are not likely to affect overall findings. Second, by following a cohort of students we can look for changes over the four years and investigate issues relating to how undergraduates make their way through the institution. Third, certain important distinctions among students, such as academic awards earned, are dependent on students' having completed their undergraduate careers. And fourth, the data base is ideally suited to possible follow-up studies of Stanford students after graduation.

B. The Data Base

Stanford's student academic records are maintained in an aging data base management system known as OASIS. The central data file in OASIS, known as the Student Master and Course (SMAC) file, contains a great deal of personal information about students (sex, birthdate, ethnic identity, SAT scores, home address, local telephone number, etc.), as well as the full academic course record for each student. Much of the personal information is coded into the SMAC file after the student's initial acceptance at the university, while several elements are updated periodically through registration and other procedures.

For each course taken by each student, the following information is gathered through the usual registration and end-quarter report processes: department and course number; quarter and year in which the course was taken; number of units for which the course was offered; number of students taking the course and rank of instructor teaching it (professor, assistant professor, lecturer, etc.); major (English, history, biology, etc.) and class (freshman, sophomore, etc.) of the student at the time he or she took the course; and grade received by the student.

These data elements comprise the bulk of the information used in the Curriculum Study. Some additional items must be coded into the system specifically for the Curriculum Study, such as whether or not a student received financial aid. The manual coding is done after each period of conferral of degrees, i.e., four times a year.

Once the manual coding has been completed and entered into the SMAC file, the student records are written to tape and transferred to the mainframe computer system at the university. On this system they are transformed by a program written in COBOL into a format that can be used by standard statistical packages such as SPSS or SAS. The program also generates a number of variables that are important for analytical purposes, such as counts of the the number of A, B, C, and other grades earned, the total number of units earned, the number of courses completed, and so on. Another COBOL program of much greater complexity is used to generate the Curriculum Report, whose format we discuss below.

The data base for each year of the Curriculum Study contains about 50 records per student, one for each course taken. With approximately 1600 students in each graduating class, there are thus some 80,000 records in the file. Such a large file size necessitates careful planning of statistical

analyses to keep costs under control. We have dealt with this problem by creating smaller data sets containing only that portion of the data needed to investigate a particular research question.

C. Stanford's Academic Structure

The basic academic unit at the university is the department, a degree-granting unit with its own faculty and courses. A companion academic unit is the interdisciplinary academic program, which is also authorized to grant and offer courses but relies on faculty from departments. Undergraduates can choose from 35 departments and 14 programs; majors in the latter account for about 20% of all students. In the discussion that follows the term "department" will be used to refer to both departments and programs.

At a higher level of academic organization at Stanford we have the school, of which there are seven. Three of these (Humanities and Sciences, Engineering, Earth Sciences) have both undergraduate and graduate programs. Four schools (Medicine, Law, Business, Education) offer graduate degrees only, although undergraduates may take some of their courses.[2] Of the schools with undergraduate majors, the School of Humanities and Sciences is by far the largest, subsuming 38 or about three-fourths of all departments. The School of Engineering contains seven departments and the School of Earth Sciences four.

For the purposes of the Curriculum Study we have used an intermediate organizational level, the school division. For this level we treat all engineering departments as a unit, all earth science departments as a unit, and four groups of departments from the School of Humanities and Sciences as units: the humanities, natural sciences, social sciences, and interdepartmental programs. In presenting findings, the Curriculum Report often compares students from the each of six school divisions or courses given by departments in each of the school divisions.

Finally, it showed be noted that the interdepartmental programs, which currently grant almost one-fifth of all bachelor's degrees, are quite disparate in nature. Most of the interdepartmental students are in international relations and human biology, programs that attract quite different types of students. This fact explains some of the apparently surprising findings concerning interdepartmental majors in the Curriculum Report.

D. The Curriculum Report

The heart of the Curriculum Study is the annual Curriculum Report, a two-volume analysis of the academic records of all students graduating in a given year. The larger volume, Descriptive Data, presents detailed information at the level of the individual department or academic program. A typical department is treated in five tables of data, yielding a complete document of about 350 pages. The companion volume, Selected Characteristics, contains some 26 tables analyzing and cross-tabulating the background characteristics of students by major department and school division. It also contains 27 tables that summarize the detailed Descriptive Data by grouping departments and programs into school divisions, as well as three summary tables that provide university-wide analyses of course choices, sources of course enrollments, and characteristics of courses.[3]

(1) Descriptive Data

In this volume each department is analyzed in a set of five tables. The tables deal with both the students majoring in each department as well as the courses offered by the department. We give a sample of the first table as Table 1, which shows the background characteristics of industrial engineering majors in the 1980-81 graduating class in the second column from the right. The table provides a context for interpreting the data for the industrial

engineering majors by supplying comparable figures for students in each of the school divisions (columns 1-8) and for all students in the graduating class (the far-right column). The table shows, for example, that 69% of the 52 industrial engineering majors were men, compared to 57% of all students and 76% of all engineering majors. It also shows that compared to the graduating class as a whole, the industrial engineering majors had relatively low verbal scores but high mathematics scores on the Scholastic Aptitude Test; that they were less likely than other students to earn awards at graduation; that a very high proportion of them entered co-terminal master's degree programs; and that very few of them attended an overseas campus. In most of the other dimensions these students were fairly typical of all graduates. Other comparisons can be made, of course, such as comparisons between industrial engineering majors and all engineering graduates, or between engineering and humanities majors.

The course-taking activity of the students majoring in the department is described by a second table for each department. It shows the distribution of departmental majors' academic units across the full range of departments; for example, one can find the percentage of course units taken by industrial engineering majors in courses in industrial engineering, history, mathematics, geology, and so on. This information enables university personnel to monitor both the types of students attracted to each undergraduate major and the types of courses being taken by students from each department.

Each department's courses are analyzed in three tables, one of which presents the general characteristics of the courses (grades given, class size, rank of instructor) while the other two describe the clientele they attract. Hence, for example, it is possible to determine the percentage of industrial engineering course enrollments accounted for by students majoring in industrial engineering, mechanical engineering, sociology, drama, and so on.

With these tables we can monitor both the overall characteristics of the courses being taught in each department as well as the types of students that enroll in the courses.[4]

(2) Selected Characteristics

This companion volume to Descriptive Statistics contains two sets of tables. The first is a series of tables that analyze the variables relating to students' background and university experience; the other set is a series of summary tables presenting the data from the larger volume in a more aggregated form. The volume begins with a table showing the distribution of students across majors and then proceeds with a summary of the characteristics of the students in each school division. Next are tables cross-tabulating each background variable with all others. For example, one table compares women and men students in the dimensions of ethnic identity, awards earned at graduation, stopping out, academic difficulty, and so on; another compares students who had academic difficulty with students who did not in terms of these same variables. A sample table showing the characteristics of women and men for the 1981-82 graduates is given as Table 2.

The second set of tables summarizes the detailed information in Descriptive Statistics at the school division level. One table shows, for example, the distribution of units of credit for humanities majors across all departments; another gives the percentage of humanities courses accounted for by students majoring in each of the undergraduate departments. These summary tables are given for all six school divisions, thereby providing an interpretive context for the data in the larger volume concerning individual departments.

(3) Distribution of the Report

The two-volume Curriculum Report is distributed to all department and program chairs, the Deans of each of the schools, and the Provost and President of the university. Because the data in the report are for the most part relatively stable from one year to the next, broad distribution is limited to every second year. To stimulate interest in the report, it is given considerable publicity by being used as frequently as possible and in as many forums as possible. Thus, for example, when the Vice-Provost for Undergraduate Education is involved in a policy discussion in the Faculty Senate, he uses relevant findings from the Curriculum Report. When a factual question arises in the work of the Committee on Undergraduate Studies (the university body whose primary function is the improvement of undergraduate education), the Registrar refers to the Curriculum Report as a likely source for illumination on the issue. By making the report and its usefulness prominent, the likelihood that it will be used and given attention increases.

OVERVIEW OF THE DATA

To conclude this introductory article we will give a brief overview of the data produced by the Curriculum Study in order to familiarize readers with it and provide a context for succeeding articles. The data presented here cover the first seven years of the study's existence: the graduating classes from 1975-76 through 1981-82. Some of the data for the earlier years is either missing or incompatible with that for the years from 1977-78 onward because the format and definitions used in producing the data base and report were modified and refined in the early years of the project. This accounts for the missing figures in the tables that follow.

A. Background Characteristics of Graduates

Beginning with the background characteristics of the graduating students in Table 3, we note that the graduating classes averaged 1625 students per year. About three-fifths of the students were men and two-fifths were women. Caucasians were the majority, representing 82% of students, with Asian-Americans, Blacks, and Chicano/Hispanic students each comprising minorities of around 5%. The remaining 3% were foreign students. The distributions of both sex and ethnic identity were quite stable over the seven years, with only a slight increase in women graduates at the end of the period.

The distributions of SAT scores, which are very high in comparison with national averages, were similarly quite stable, but for the prior school variable there was a definite trend toward fewer students coming from other colleges (i.e., transfer students). This shift appears to have been due to the increasing number of entering freshmen over this period. Transfer students are admitted to "fill the gap" left by students stopping out, but with a higher number of freshmen enrolling than expected there were fewer spaces available for transfers.

The next two variables dealing with units of credit reveal, first, that there was a strong upward trend in the percentage of graduates who had earned college units by taking Advanced Placement tests before coming to Stanford. This finding suggests that the average number of units needed by entering students in order to graduate was dropping slightly. It also is a warning that enrollments in some introductory courses, such as mathematics or English, may decline in the long run. On the other hand, there was a slight decline in the proportion of students who transferred college units to Stanford, reflecting the drop in transfer students in the undergraduate population. But

the fact that 45% of the students transferred units from other colleges, while only 17% were actual transfer students, indicates clearly that many students took one or more courses (often during the summer) at other schools while they were Stanford students.

The section on awards provides several disparate measures of students' academic accomplishment. Phi Beta Kappa conferral is based primarily on grades received and is limited to approximately 10% of any graduating class. University Distinction is an award specific to Stanford and is based on grades and other academic accomplishments. Each department can recommend Distinction for a maximum of 25% of its major students each year. The third award, Departmental Honors, is awarded by departments and is more restrictive than distinction. It is given only to those students who participate in a Departmental Honors program, which usually involves a special sequence of seminars and preparation of a Senior Honors Thesis based on original work or research. While Departmental Honors did not show any clear trend over the seven years, the percentages of students earning Phi Beta Kappa and Distinction declined somewhat. This was not the result of a policy change but was apparently due to the judgment of faculty that the quality of student effort in these years was declining -- students were taking fewer challenging courses and doing less individual study than previously, so that high grade point averages did not always indicate outstanding achievement.

The final section of characteristics is a mixed group of variables that can be useful for particular research issues. By "studied overseas" we refer to attendance at a Stanford overseas campus, an opportunity that is available to all students and realized by about one-third of them. "Academic difficulty" includes several degrees of seriousness. Least serious is "probation," which is a quite common fate even for students who eventually do

very well academically. Only the more serious levels of academic difficulty (provisional registration, suspension) are registered here, and only a small minority of students had such difficulty. Finally, "stopped-out" means that a student was not registered at the university for one or more quarters of the normal academic year (summers excluded) between entrance and graduation. Over a fifth of the students stopped out for at least one quarter, but we have insufficient data so far to be able to say if there is a trend in this practice.

Hence, for the graduating classes in their entirety there were only minor trends in the data. This overall stability masks a great deal of change in various dimensions at finer levels of analysis, however, and we will explore some of these dimensions in later articles.

B. Course Enrollments and Units of Credit

The data in Table 3 describe characteristics of students. In Table 4 we present data concerning the courses students take, including course enrollments and units of credit, over the seven years. The top three rows of the table show that, while the numbers of graduates and course enrollments fluctuated only modestly over the period, enrollments per graduate increased substantially. As we show in the next article in this series, this increase was due largely to an increase in enrollments in engineering courses, which generally carry fewer units of credit than courses in other divisions. The number of units of credit taken by the average graduate also increased by over seven units. Note that by 1981-82 students averaged over 184 units of coursework at Stanford -- a remarkably high figure when we consider that 180 units is the minimum number required for graduation and that a large proportion of students transfer college units to the university. This development is particularly surprising in light of the trend noted above

toward an increasing proportion of students entering Stanford with advanced placement units of credit. It indicates that, while enrollments in introductory courses may have been decreasing, enrollments in more advanced courses more than compensated so that the average student was taking more course units in 1981-82 than earlier.

The final row of the table shows that the number of units per course enrollment was quite stable over the six years for which we have data. This figure includes all enrollments, from chemistry to physical education to music appreciation. Once again, there is great variance at a finer level of analysis that will be analyzed in a later article.

C. Characteristics of Courses

In this final section we discuss some of the basic characteristics of courses at Stanford. The data for these characteristics were so stable over the seven years that we present only the means in the text rather than a table of year-by-year results. The distribution of grades received was about 43% A's, 31% B's, 7% C's, 1% D's, and 18% "pass" grades (courses taken on a pass/no credit basis). These figures confirm that grades at Stanford cluster at the high end of the scale. Year-by-year figures show that there was in fact slight deflation in grading (a drop of three percentage points in A grades) during the late 1970s, caused perhaps by the reinstitution of the D grade in 1976-77. It is also interesting to note that the revival of D grades did not occasion an increase in the use of the pass/no credit option; pass grades dropped from 19% to 16% of all grades over the period.

The distribution of class size was also very stable. Classes of eight or fewer students accounted for 7% of enrollments, classes of 9 to 15 students for 11%, classes of 16 to 30 students for 20%, classes of 31 to 120 students for 35%, and classes larger than 120 students for 27% of enrollments. The

figures suggest that small classes are very common at Stanford, with fully 38% of all enrollments occurring in classes having 30 or fewer students. Note the phrasing here: the variable is the distribution of student enrollments by class size, not the distribution of classes by class size. In fact the percentage of classes having more than 120 students was much smaller than the 27% of enrollments in classes of this size.

SUMMARY

The Stanford Curriculum Study is designed to produce broad-based and systematic information about actual curricular choices of undergraduates so that policy decisions can be better informed and undergraduate education can be monitored on a regular basis. Now in its eighth year, the Study has proven to be of considerable value to Stanford and has established itself as a respected tool that is being used by both administrators and faculty members. We hope that this article has demonstrated the value of curricular analysis and that the Stanford project will serve as an example that helps other institutions initiate similar efforts to monitor and improve their undergraduate programs.

Three articles in this series are to appear in succeeding issues of this journal. In order, they concern (a) the distribution of degrees granted and its relationship to course enrollments, (b) sex differences in the characteristics, curricular choices, and academic performance of undergraduate students; and (c) grading, academic honors, and other indicators of student accomplishment.

FOOTNOTES

1. By defining the population in this way we have omitted the academic records of students who have not received bachelor's degrees. In a sense, then, the population consists only of academically "successful" students. Typically about 70% of entering freshman students graduate "on time," that is, by the end of their fourth academic year, and an additional 15% graduate within six years, while very few students ever complete bachelor's degrees at Stanford if they have not done so within six years. For any given year, then, the population includes a large group of students who graduated within the nominal four-year period and a smaller group of students who required an additional quarter, year, or even more. The approximately 10% of students matriculating at the university who never complete bachelor's degrees at Stanford do not enter the data base; while perhaps half of these students transfer to other institutions and receive degrees elsewhere, the remaining 5% who never graduate anywhere are an important sub-population in their own right.

2. Students also have the possibility of majoring in the School of Medicine's department of Medical Microbiology, which graduates two or three students a year.

3. Readers interested in examining either or both volumes for 1980-81 graduates can purchase them at cost from the Office of Undergraduate Research, Building One, Room 2-U, Stanford University, Stanford, CA 94305.

4. The tables in Descriptive Statistics analyzing courses for each department or program provide much more than the simple frequency distributions for these variables. The distribution of grades, for example, is broken down by year in school (freshman through senior) and presented separately for three different groups of students: those majoring in the given department or program, those

majoring in "cognate" departments or programs (i.e., departments in the same school division), and those majoring in departments outside the school division. Thus a multiplicity of comparisons can be made from a single table, including longitudinal analyses that trace the academic performance of students over their four-year careers at Stanford.

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TABLE 1
SAMPLE CURRICULUM STUDY TABLE
FROM DESCRIPTIVE STATISTICS
1980-81 A.B./B.S. RECIPIENTS

BACKGROUND AND SELECTED CHARACTERISTICS OF MAJORS IN INDUSTRIAL ENGINEERING

	EARTH SCIENCES	ENGIN-EERING	HUMANITIES & SCIENCES					OTHER		TOTAL
			HUMAN-ITIES	NATURAL SCIENCE	SOCIAL SCIENCE	INTER DEPT	TOTAL H&S		THIS MAJOR	
NUMBER OF GRADUATES	40	249	307	222	467	285	1281	13	52	1583
1. SEX										
MALE	58%	76%	50%	68%	56%	44%	54%	38%	69%	57%
FEMALE	43%	24%	50%	32%	44%	56%	46%	62%	31%	43%
2. ETHNIC ORIGIN										
ASIAN AMERICAN	5%	11%	2%	9%	3%	4%	4%	-	12%	5%
BLACK	3%	2%	1%	5%	6%	5%	5%	-	4%	4%
CAUCASIAN	83%	76%	90%	81%	83%	82%	84%	92%	75%	83%
CHICANO	3%	6%	5%	1%	5%	5%	4%	8%	2%	4%
OTHER HISPANIC	-	1%	1%	1%	*%	1%	1%	-	2%	1%
NATIVE AMERICAN	-	-	1%	-	*%	1%	*%	-	-	*%
FOREIGN STUDENT	8%	4%	1%	3%	2%	3%	2%	-	6%	2%
3. SAT VERBAL SCORES										
200-550	25%	26%	18%	22%	28%	29%	25%	8%	31%	25%
551-610	23%	31%	20%	26%	31%	29%	27%	8%	37%	28%
611-670	33%	23%	35%	27%	24%	21%	26%	23%	25%	26%
671-800	18%	18%	26%	24%	14%	18%	20%	62%	8%	20%
UNAVAILABLE	3%	1%	2%	1%	2%	2%	2%	-	-	2%
4. SAT MATH SCORES										
200-600	18%	10%	36%	11%	29%	31%	28%	15%	13%	25%
601-660	25%	20%	25%	22%	26%	27%	25%	23%	29%	24%
661-710	28%	29%	20%	24%	24%	21%	23%	15%	27%	24%
711-800	28%	40%	17%	42%	18%	19%	22%	46%	31%	25%
UNAVAILABLE	3%	1%	2%	1%	2%	2%	2%	-	-	2%
5. PRIOR SCHOOL										
PUBLIC HIGH SCHOOL	60%	63%	57%	67%	62%	64%	62%	69%	62%	62%
PRIVATE HIGH SCHOOL	28%	16%	26%	23%	21%	26%	24%	31%	15%	23%
COLLEGE	10%	20%	16%	10%	16%	10%	14%	-	23%	14%
UNCLASSIFIED	3%	1%	2%	*%	1%	-	1%	-	-	1%
6. UNITS										
EARNED ADV PLACEMENT UNITS	13%	29%	32%	41%	24%	27%	29%	54%	23%	29%
TRANSFERRED COLLEGE UNITS	45%	47%	45%	39%	42%	43%	42%	54%	40%	43%
EARNED 187+ UNITS AT GRAD	43%	45%	41%	51%	23%	42%	36%	69%	40%	38%
7. AWARDS										
UNIVERSITY DISTINCTION	25%	24%	24%	21%	20%	21%	22%	46%	17%	22%
PHI BETA KAPPA	5%	4%	11%	13%	8%	8%	10%	8%	4%	9%
DEPARTMENTAL HONORS	-	-	12%	23%	11%	10%	13%	31%	-	11%
NO AWARDS	75%	76%	67%	62%	74%	73%	70%	38%	83%	71%
8. GRAD SCHOOL PLANS										
CO-TERMINAL MA/MS	8%	44%	6%	14%	4%	6%	6%	15%	37%	12%
APPLIED TO MED SCHOOL	-	3%	2%	56%	2%	11%	13%	23%	-	11%
TOOK GRAD RECORD EXAM *	30%	14%	11%	12%	6%	8%	9%	-	10%	10%
TOOK LAW SCHOOL ADM TEST*	3%	1%	17%	2%	16%	10%	13%	-	-	10%
TOOK GRAD MGMT ADM TEST*	-	7%	7%	2%	12%	8%	8%	-	12%	8%
TOOK NONE OF THESE TESTS*	68%	76%	68%	32%	67%	68%	62%	77%	79%	64%
9. OTHER										
STUDIED OVERSEAS	18%	16%	50%	18%	40%	46%	40%	23%	13%	35%
INTERCOLLEGIATE ATHLETICS	20%	20%	13%	9%	16%	16%	14%	31%	23%	15%
HAD ACADEMIC DIFFICULTY	8%	4%	9%	4%	7%	6%	7%	8%	6%	6%
RECEIVED FINANCIAL AID	60%	71%	57%	65%	61%	62%	61%	77%	63%	63%
STOPPED-OUT	35%	13%	38%	9%	26%	25%	26%	46%	12%	24%

*Data for these variables are incomplete.

TABLE 2
SAMPLE CURRICULUM STUDY TABLE
FROM SELECTED CHARACTERISTICS
1981-82 A.B./B.S. RECIPIENTS

COMPARISON OF BACKGROUND AND SELECTED CHARACTERISTICS BY SEX

	FEMALE	MALE	ALL GRAD-UATES
NUMBER OF GRADUATES	719	931	1650
SEX			
MALE	-	100%	56%
FEMALE	100%	-	44%
ETHNIC ORIGIN			
ASIAN AMERICAN	6%	6%	6%
BLACK	5%	4%	5%
CAUCASIAN	80%	79%	80%
CHICANO	5%	5%	5%
OTHER HISPANIC	1%	1%	1%
NATIVE AMERICAN	1%	1%	1%
FOREIGN STUDENT	3%	5%	4%
PRIOR SCHOOL			
PUBLIC HIGH SCHOOL	62%	64%	63%
PRIVATE HIGH SCHOOL	23%	24%	23%
COLLEGE	15%	12%	13%
UNCLASSIFIED	1%	1%	1%
UNITS			
EARNED ADV PLACEMENT UNITS	32%	36%	34%
TRANSFERRED COLLEGE UNITS	47%	39%	42%
EARNED 187+ UNITS AT GRAD	43%	46%	45%
AWARDS			
UNIVERSITY DISTINCTION	19%	25%	22%
PHI BETA KAPPA	7%	10%	8%
DEPARTMENTAL HONORS	9%	14%	12%
NO AWARDS	75%	66%	70%
GRAD SCHOOL PLANS			
CO-TERMINAL MA/MS	9%	16%	13%
APPLIED TO MED SCHOOL	8%	14%	12%
TOOK GRAD RECORD EXAM	12%	9%	10%
TOOK LAW SCHOOL ADM TEST	10%	11%	11%
TOOK GRAD MGMT ADM TEST	7%	9%	8%
TOOK NONE OF THESE TESTS	66%	59%	62%
OTHER			
STUDIED OVERSEAS	46%	31%	37%
INTERCOLLEGIATE ATHLETICS	14%	17%	16%
HAD ACADEMIC DIFFICULTY	7%	7%	7%
RECEIVED FINANCIAL AID	59%	64%	62%
STOPPED-OUT	27%	22%	24%

TABLE 3

BACKGROUND AND SELECTED CHARACTERISTICS
OF GRADUATES, 1975-76 TO 1981-82
(Percentages)

	1975 - 76	1976 - 77	1977 - 78	1978 - 79	1979 - 80	1980 - 81	1981 - 82	Mean
Number of Graduates	1675	1626	1638	1599	1606	1583	1650	1625
Sex								
Male	58	61	59	60	59	57	56	59
Female	42	39	41	40	41	43	44	41
Ethnic Origin								
Asian American	6	6	7	6	5	5	6	6
Black	4	4	4	5	4	4	5	4
Caucasian	84	82	81	81	83	83	80	82
Chicano/Hispanic	4	5	5	5	5	5	5	5
Other	2	3	3	3	3	3	4	3
Scholastic Aptitude Test Scores								
Verbal								
671-800	-	22	23	21	21	20	23	22
611-670	-	26	28	27	26	26	26	26
551-610	-	24	24	25	28	28	28	26
200-550	-	25	22	26	23	25	21	24
Unavailable	-	3	3	2	2	2	3	2
Mathematics								
711-800	-	25	26	25	27	25	26	26
661-710	-	25	23	23	24	24	21	23
601-660	-	24	23	22	24	24	24	24
200-600	-	23	26	28	22	25	26	25
Unavailable	-	3	3	2	2	2	3	2
Prior School								
Public High School	57	61	57	61	61	62	63	60
Private High School	18	18	21	21	21	23	23	21
College	23	20	19	17	15	14	13	17
Unclassified	2	1	3	1	3	1	1	2
Units of Credit								
Earned Advanced Placement Units	20	21	24	26	28	29	34	26
Transferred College Units	48	46	47	43	44	43	42	45
Awards								
University Distinction	24	26	23	22	20	22	22	23
Phi Beta Kappa	-	11	11	10	10	9	8	10
Departmental Honors	-	14	13	10	12	11	12	12
No Awards	-	66	69	72	72	71	70	70
Other								
Studied Overseas	34	-	35	34	34	35	37	35
Had Academic Difficulty	-	5	3	5	3	6	7	5
Stopped-out	-	-	-	22	23	24	24	23

TABLE 4

COURSE ENROLLMENTS AND UNITS OF CREDIT PER GRADUATE, 1975-76 TO 1981-82

	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	Mean
No. of Graduates	1675	1626	1638	1599	1606	1583	1650	1625
Course Enrollments	79,226	82,760	82,628	81,077	82,092	80,674	85,899	82,050
Enrollments/ Graduate	47.3	50.9	50.4	50.7	51.1	51.0	52.1	50.5
Units of Credit	-	289,011	290,111	284,913	289,066	287,023	304,115	290,706
Units/Graduate	-	177.1	177.1	178.2	180.0	181.3	184.3	179.7
Units/Enrollment	-	3.49	3.51	3.51	3.52	3.56	3.54	3.52